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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/779,937	02/08/2001	Seung Kil Kim	001033	4134

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EXAMINER

WEST, LEWIS G

ART UNIT

PAPER NUMBER

2682

DATE MAILED: 02/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/779,937	Applicant(s) KIM, SEUNG KIL	
	Examiner Lewis G. West	Art Unit 2682	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 8-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8-16 is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 February 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Arguments

Applicant's arguments with respect to claims 1-16 have been considered but are moot in view of the new ground(s) of rejection.

Applicant has now expanded on previous limitations that said the receiver would be switched from antenna to ground. When given a reasonable interpretation consistent with the specification, as required by MPEP, it would have been understood, according to applicant's specification and drawings, as well as the detailed description of said drawings, that applicants disclosed embodiment for one antenna involves switching the antenna to ground, not the receiver, in order to ensure proper impedance to the antenna. Therefore arguments related to these added limitations are not persuasive as they are new matter, and the claims will be treated as if the connection is from antenna to ground as originally specified.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the circuit wherein a GPS receiver may be switched to ground must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure

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must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because the drawings are informal because of poor line quality in both the outlines of figures and diagrams as well as the labels being poorly handwritten in some cases illegible. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-5 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Specifically, claims 1 and 2 contain limitations not specifically supported by the original specification. The wording of the original claim did not clearly disclose that the receiver was connected to ground, and when read in light of the original specification in accordance with MPEP, it would be understood that the antenna was connected to ground, as per the original rejection. Therefore, these limitations are new matter as there is no previous support in the specification or drawings. Correction is required.

Claims 1-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1-5 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: If the switch now goes from the GPS receiver to ground, and not the antenna to ground as was previously understood when reading the claims in light of the specification in accordance with MPEP, there is no structural relationship by which the impedance of the antenna is maintained when the switching occurs. According to applicant's

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specification, " Figs. 3a and 3b show the correlation between the transmit control signal 32 and the position of switch 34. When cellular transceiver 16 is transmitting, transmit control signal 32 causes switch 34 to switch to the "B" position, whereby antenna 30 is connected to ground through an impedance matching circuit, such that a constant antenna load can be maintained. When there is no transmission, switch 34 is in the "A" position, and GPS receiver 14 is connected to antenna 30." Therefore, applicant's claim does not show the necessary structural relationship between antenna and ground. Correction is required, no new matter may be added.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 6 is rejected under 35 U.S.C. 102(e) as being anticipated by Krasner (US 6, 107,960).

Regarding claim 6, Krasner discloses in a cellular telephone having a GPS receiver and a triple band antenna, an improvement comprising: a switch, connecting said GPS receiver and said antenna; wherein said switch disconnects said GPS receiver from said antenna when said cellular controlled by a signal from said cellular telephone is transmitting; a connection between said cellular telephone and said GPS receiver for transmitting information from said cellular telephone to said GPS receiver for transmitting information from said cellular telephone to said

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GPS receiver regarding a predefined cellular telephone transmission time period; and means in said GPS receiver for delaying the start of a satellite search until the end of said predefined cellular telephone transmission time period. (Col. 7 line 36- Col. 8 line 17).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krasner (US 6,107,960) in view of Eastmond (US 6,088,337).

Regarding claim 1, Krasner discloses a method of allowing a GPS receiver and a cellular phone transceiver to share a common antenna (Col. 8 lines 18-30) comprising steps of: coupling GPS receiver and cellular transceiver antenna and disconnecting GPS receiver from antenna when cellular telephone transceiver is transmitting (Col. 7 line 64- Col. 8 line 17). Krasner does not expressly disclose switching from antenna to ground when the cellular phone is transmitting. Eastmond teaches switching from antenna to ground (figure 2, item 208 and figure 5 item 508; also column 2 line 60-col. 3 line 36) Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to switch from antenna to ground, to change the antenna array pattern in a way that increases the likelihood of improved signal quality. (Eastmond col. 2 line 65-col. 3 line 5)

Regarding claim 2, the combination of Krasner and Eastmond discloses the method of claim 1 wherein said disconnecting step comprises the steps of: providing a signal indicating when said cellular telephone transceiver is transmitting; and providing an electronic switch controlled by said signal to selectively disconnect said GPS receiver from said antenna and connect said GPS receiver to ground. (Col. 7 line 64- Col. 8 line 17).

Regarding claim 3, the combination of Krasner and Eastmond discloses the method of claim 1 where said antenna is a triple band antenna. (Col. 7 line 64- Col. 8 line 17).

Regarding claim 4, the combination of Krasner and Eastmond discloses the method of claim 3 wherein said triple band antenna is tuned to the transmit and receive frequencies of said cellular telephone transceiver and the receive frequency of said GPS receiver. (Col. 7 line 64- Col. 8 line 17).

Regarding claim 5, the combination of Krasner and Eastmond discloses the method of claim 1, further comprising, causing said cellular telephone transceiver to provide a signal to said GPS receiver when said cellular telephone transceiver ceases transmitting and causing said GPS receiver to begin searching for satellite signal when said signal is received. (Col. 7 line 64- Col. 8 line 17).

Allowable Subject Matter

The following is a statement of reasons for the indication of allowable subject matter:

Claims 8-16 are allowed.

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Regarding claims 8 and 13, the prior art, for example the cited reference Shirai (US 5,341,301), teaches the use of diversity antennae for GPS receivers, diversity providing multiple opportunities to capture a weak signal and aiding in "urban canyon" type environments. Also known in the art is switching between cellular or multimode antennae and dedicated GPS antennae. The difference in the present invention is the use of a triple band antenna for both cellular and GPS signals, and a separate GPS diversity antenna, wherein the GPS receiver is switched from the triple band antenna to the GPS diversity antenna when the cellular phone is transmitting. When incorporating all the limitations of the claim, none of the prior art discloses the features as claimed.

Claims 9-12 and 14-16 depend directly or indirectly from allowable base claims. When incorporating all the limitations of the base claim and any intervening claims, none of the prior art discloses the features as claimed.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lewis G. West whose telephone number is 703-308-9298. The examiner can normally be reached on Monday-Friday 6:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on 703-308-6739. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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